Developing Labour Market for an Ageing Population

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Abstract

The concept of "retirement" can have negative impacts on society as it prevents the ageing population from contributing the accumulated human capital to society, earning income or maintaining good health. This study demonstrates how a well-designed digital platform can be instrumental in enhancing the work potential of and harnessing human capital value from the ageing population. This study surveyed both employers and the ageing population and found that a digital platform that encompasses the necessary functions, such as employers' profiles, the elderly's profiles, a smart search engine, past employment review, map/location proximity or advertisement space, can significantly lower the transaction costs of work placement and facilitate workability. The contribution of this study is to highlight the significance of the value of human capital instilled in an ageing population and to offer a way to harness the human capital value of the ageing population via a digital platform, enhance engagement and employment, and pass this invaluable asset to future generations, leading to welfare improvement of society.

Keywords: Ageing Population, Retirement, Human Capital, Employment, Digital Platform

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1. **Rationale of the Study**

   Aging Population in Thailand

   A complete-aged society is defined as a society where more than 20 per cent of the population is aged more than 60 years old (or 14 per cent of the population is aged more than 60 years old)[2]. With this definition, Thailand has become a complete-aged society since 2023, when persons aged 60 or older in Thailand reached 20 per cent of the total population. The ageing population issue is new to Thailand and has caught the country unprepared. The key concerns for Thailand are: 1) some elderly lack jobs and income to support their retirement, 2) many elderly have insufficient savings, and 3) the elderly begin to experience both physical and mental health issues. These problems thus give rise to subsequent impacts on society, including family burden, government direct burden, such as healthcare expense and elderly allowance, as well as government indirect burden, such as the need to allocate budget to support the Department of Elderly Persons (DOP) under the Ministry of Social Development and Human Security (MSDHS), Thailand.

   Financing Ageing Population Options

   To respond to the ageing population issues, several concepts have been put forward, there are:

   First, the financial management: this concept involves a readjustment of personal financial management, such as an increase in savings from a young age to ensure sufficient saving is attained when retired. An increasing saving approach is not without shortcomings. Many families already experience hardship while at working age and have difficulty earning enough income to support their financial obligations, such as children's education, home

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[2] United Nations, Department of Economic and Social Affairs, Population Division. *World Population Ageing 2019: Highlights*. ST/ESA/SER.A/430.

mortgage, insurance or monthly bills. Many families are also in chronic debt. To reduce their spending further in order to save more is nearly impossible for many families.

Second, the reverse mortgages: this financial instrument would require the elderly to use their homes as collateral in exchange for a steady monthly income. This approach has not been popular as the financial institutions often offer loans that are much below the home values, hence making reverse mortgages unattractive.

Third, upskill and reskill: this approach involves providing modern skills to the elderly, such as computing, handicraft or haircut. Given that the elderly are already late in their career, learning new skills is often problematic, and the level of skill acquisition is below what the market expects.

Fourth, organizing elderly social groups: while this approach has positive benefits, such as health benefits, both physical and mental but it cannot overcome the financial burden many elderly are facing.

Amidst the numerous approaches above, this research envisions that harnessing human capital value from the ageing population has a role to play in improving the welfare of the ageing population. Many elderly possess human capital instilled in them since a young age, and this human capital can be turned into cash flow to support their expenses. This human capital includes a wide range of knowledge or skill accumulation, such as a variety of cooking, traditional music, painting, tutoring, sports, farming, handicrafts, pottery, crafts, fortune telling, driving, childcare, and pet care, among others. These human capitals can be capitalised into income flows for the elderly when they can identify the potential demand that is willing to pay for such services. The benefits of human capital are not limited to a mere source of income flow. It also enables invaluable human capital to be transferred to younger generations and not evaporate into thin air, diversifies society and economic activities and improves the physical and mental health of the elderly. These benefits will not only generate income but will indirectly reduce both the private costs and government support for elderly care.

Although an ageing population is more evident in societies, connecting the human capital of the elderly with consumers has been limited, owing largely to high transaction costs, such as the cost of information, the cost of verification, or the cost of contract enforcement. However, with ever-expanding social media applications, these transaction costs can be greatly reduced and the consumers can connect with and benefit from the human capital of the elderly much more conveniently. The innovation of functions contained in social media, such as Facebook, eBay, Shopee, Tinder, LinkedIn and Google Maps are significantly beneficial in connecting the elderly and the consumers with much lower transaction costs.

Despite much potential these social media applications can offer to enhance the elderly enhance the employability, an application that is specifically designed to facilitate job search and employability of the elderly does not exist. It is therefore an objective of this research to investigate the needed functions of such an application that will enhance the employability of the elderly and connect the elderly back to society so that the human capital value inherited within the elderly can be harnessed.

Objective of the research

1) To assess the potential of tapping into the elderly human capital through informal employability.
2) To assess the state of the elderly job search digital platform.
3) To identify the essential features of the elderly job search digital platform.
4) To provide public policy recommendations to enhance the elderly's informal employment.

Research Questions

1) What is the potential of the elderly's informal employment?
2) What is the current state of the elderly job search digital platform?
3) What are the essential features of the elderly job search digital platform?
4) What are the public policy recommendations to enhance the elderly's informal employment?

Contribution of the research

The contribution of this research is to highlight the significance of human capital inherited in the ageing population and to illustrate how a well-designed digital platform can be instrumental in lowering the job search transaction costs, leading to improving the elderly's informal employability, income, social and mental health.

The indirect contribution of this research shows how the development of informal elderly employment can help reduce the elderly's reliance on both family and government assistance. On human capital, connecting the elderly with society will enable human capital inherited in the ageing population to be passed on to the next generations, hence preserving the valuable human capital for future generations. Last but not least, with the diversity of human capital and skills, economic activities will inevitably become diversified. This diversified structure will add resilience, cushion the economy from unforeseen disturbances, and ensure long-term economic stability.

2. Conceptual Framework

Scientific evidence shows that living things appeared on Earth around 600 million years and modern humans (Homo Sapiens) are reported to have existed around 300,000 years. These living beings have learned to survive either via competition, passive skills, camouflage or mere hibernation, but all of them need to work from the day they leave their nest to the day they die. When none of the living beings can "retire" from working, hunting and feeding, living beings are, physically and mentally, accustomed to the system of working from birth until death.

Human beings are not much different from other living beings in the sense that many human beings in several parts of the world work until death. Indigenous peoples, tribal people, farmers or even craftsmen spend most of their lifespan working until death as working generate products and thus generates or in exchange of income. Human beings have

also developed minds that are kept healthy through socialising and being a part of society. It is worth mentioning that as humans age, their role in labour will change according to their physical and mental health. While the younger generation engages in hard work, the elderly generation tends to shift their responsibility towards less labour-intensive responsibilities. This working pattern of human beings can be referred to as life-long working.

There are several private and social benefits of life-long working lifestyle.

1) Direct income generation: the working ageing population will be able to generate income through the use of human capital. They can engage in part-time employment according to their health conditions and time preference.

2) Physical and mental health benefits: when the ageing population re-enters the labour force and society, they will receive the daily exercise they need and meeting with people will keep their mental health condition strong.

3) Human capital and future income effect: a key benefit of re-entering the labour force or informal labour market is the ability to pass on the human capital instilled in the ageing population to the younger generations, hence preserving the invaluable knowledge within society.

4) Indirect effects: when the working ageing population engages in the informal labour market, it generates income, which will reduce the need for family care, reduce family expenses and the need for excessive government assistance.

5) Diversification and stabilization effect: as human capital instilled within the ageing population is very diverse, ranging from traditional culinary, craftmanship, languages, traditional sports, home care or pet care, expansion of these informal activities will diversify the economies, hence promote resilience and can cushion the economies against shocks.

However, only about 100 years ago, society came up with the concept of "retirement". This concept originated in Germany when human only work for a given period, or the so called "working age" and after which he/she will retire from work to spend the

rest of life on some form of "pension". This life style soon spread across the labour markets around the globe, particularly the civil servants of the government sector and large private corporations as well.

The outcome of "retirement" is ageing population is separate from society and have their own non-working lifestyle. While some retired population may have sufficient pension, many will live off a limited provident fund and soon they will need assistance (time and money) from the family as well as the government. When the ageing population are alone at home, their health conditions, both physical and mental, tend to deteriorate, which will require more resources and attention. All of this led society into situations many countries and societies are facing, that is, the ageing population will no longer contribute human capital to society and most importantly, the ageing population has become a burden and a cost on society. Many societies are now trying to reverse this trend by returning the ageing population to a normal lifestyle, such as arranging for daily recreation, including exercises in public areas, social events or mental counselling. These ad hoc activities are not only costly and ineffective, but they also impose a tremendous opportunity cost from society in the form of preventing society from reaping the full benefit from the human capital of the ageing population.

Returning the ageing population to society through working is thus a solution to not only saving private costs or government expenses, but the working environment will also provide the ageing population with opportunities to maintain strong physical and mental health. An important obstacle facing the ageing population is the high transaction cost of returning to a working lifestyle. For this reason, this research sees an opportunity to develop a digital platform that will aid the ageing population in work opportunities.

3) Objectives of the Study

This research has 2 objectives:

1) Thailand policy on ageing population.

2) To assess the willingness to work of and the willingness to hire the ageing population

3) To evaluate the current job search digital platforms and propose improvements to job search platforms that will enhance the work opportunities of the ageing population.

4) Contribution of the Research

1) This research will assess the human capital instilled in the elderly that has potential for income earning.

2) This research will provide knowledge on the willingness to work of the elderly and the willingness to hire the elderly of employers. This knowledge is important for the future development of a digital platform for job search of the elderly.

3) This research will assess the existing digital platforms for their suitability for the elderly job search.

4) This research will provide recommendations of the needed features of appropriate digital platforms that will enhance the employability of the elderly.

In sum, this research will contribute to the employability of the elderly, enabling the elderly to re-enter the informal job markets and make a significant contribution to society in the form of income generation, reducing the cost of family care and government assistance, reducing health costs physically and mentally, passing on human capital to the younger generations and diversifying the economy and hence promote economic and social stability.

5) Methodology

This research uses a mixed-method research design, combining qualitative and quantitative methods. Qualitative research involves in-depth interviews with experts or policymakers from relevant agencies and private companies that employ the elderly of various sizes. Quantitative research is used to analyse the factors that determine elderly employment in the sample group in Thailand, with the target group being the population aged 45 and over, to reflect important issues of preparing for employment before entering elderly, as well as to develop and design lifelong learning innovations for elderly employment, and to present cooperation mechanisms and policy recommendations for developing employment models for the elderly to fully prepare for an aged society in Thailand.

6) Data

This research surveyed primary data collected in 2566, consisting of 3 parts:

1) A survey of 500 elderly in 5 provinces in Thailand, 250 of the elderly who reside in the urban areas: Bangkok and 250 of the elderly who reside in the rural areas. The selected rural provinces are Chiang Mai, Ubon Rachathani, Nakon Srithammarat and Chonburi province.

2) A survey of 10 corporations who are potential employers of the elderly.

3) A survey of 8 job search digital templates, consisting of 4 Thai job search digital templates and 4 international job search digital templates in Finland, the Netherlands, United States of America, Japan, South Korea, Singapore and the Philippines.

7) Research Results

Table 1 shows the number of samples from the selected provinces. For Bangkok that is the capital of Thailand, the study selected a total of 100 samples and assign them as samples of urban areas. The remaining 145 urban samples were selected from the remaining 4 provinces

in Thailand. On the other hand, as Bangkok does not have rural areas, all the 255 rural samples were selected from the 4 provinces and none from Bangkok.

Table 1 The distribution of samples in selected provinces

Province	Ageing Population	Proportion of Ageing to total Population	Proportion			Sample Size		
			Urban	Rural	Total	Urban	Rural	Total
Bangkok*	1,210,827	49.2%	76.2%	23.8%	100.0%	100	-	100
Chiang Mai	394,278	16.0%	38.0%	62.0%	100.0%	45	75	120
Ubon Rachathani	314,828	12.8%	20.7%	79.3%	100.0%	20	80	100
Nakon Srithammarat	296,885	12.1%	18.9%	81.1%	100.0%	20	75	95
Chon Buri	243,165	9.9%	69.0%	31.0%	100.0%	60	25	85
Total	2,459,983	100.0%				245	255	500

Table 2 The situation of ageing population working

Questions		Area					
		Urban		Rural		Total	
		จำนวน	ร้อยละ	จำนวน	ร้อยละ	จำนวน	ร้อยละ
Need to work	No need	21	8.3	30	12.0	51	10.2
	Need work	232	91.7	219	88.0	451	89.8
	Total	253	100.0	249	100.0	502	100.0
Currently working	Not working	35	13.8	50	20.1	85	16.9
	Working	218	86.2	199	79.9	417	83.1
	Total	253	100.0	249	100.0	502	100.0

Table 2 shows that as much as 89.8 per cent of the elderly need work. Only 10.2 per cent of the elderly do not need work. This shows that there is a potential for the elderly to re-enter the labour market in Thailand. This potential for re-entering the labour market is slightly higher for the urban areas of 91.7 per cent and slightly lower for the rural area of 88.0

per cent. This could be because in the rural areas, the elderly are able to live on substance living relying on farm produce. Furthermore, currently, as much as 81.3 per cent of the elderly population is working. This confirms that working at an older age is common and the labour market for the elderly should be further promoted. The concept of retiring from work is inconsistent with the Thai situation and may only apply to a small fraction of the Thai population, e.g. retired civil servants.

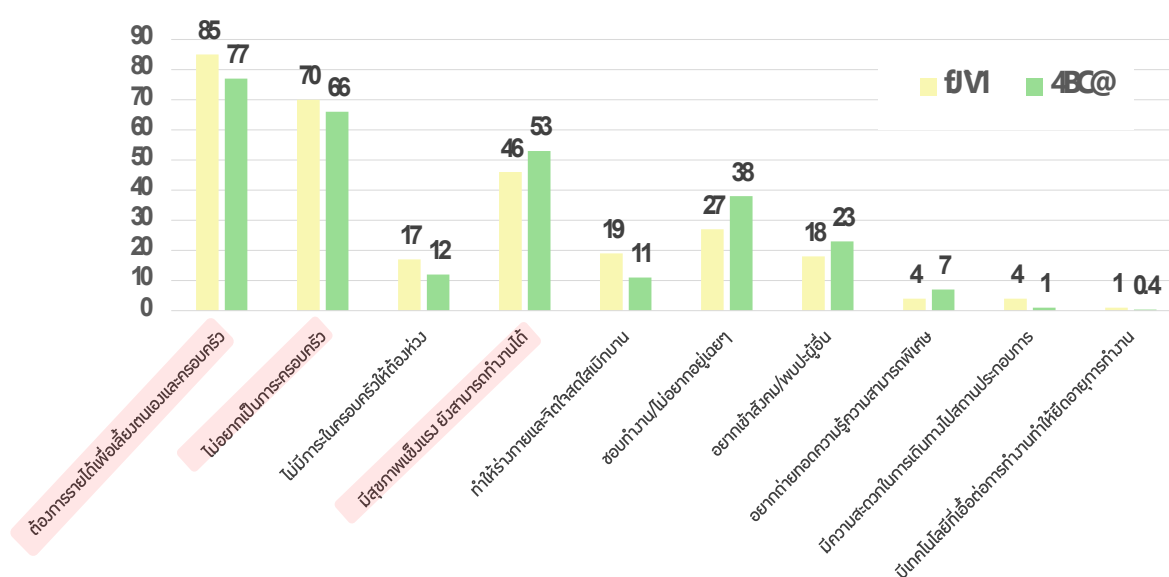**Table 3 Reasons for the need to work**

Table 3 shows the reasons why the elderly need to work. The highest frequency of response is the elderly needs income and be able to rely on their own, next is not to be a burden to family members. About half of the elderly surveyed reported that working keeps them healthy while about 30 per cent reported that they enjoy working and do not want to be alone, They prefer to be return to society with others.

The model estimation for the urban area shows that age, income and health condition are the key factors that explain why the elderly would want to work. The signs of the estimation shows that as the elderly grow older, they will not be able to enter the labour market, as the elderly have more income they tend to work less and the healther the elderly are the more they are able to participate in the labour market.

Table 4 The model estimation for the urban area

<u>Dependent variable:</u> WORKY = probability to work

Variables	(1)	(2)	(3)	(4)	(5)	(6)
agexx	-0.0745405**	-0.0631668*	-0.0483538*	-0.0675325**	-0.0814686**	-0.0616684**
	(0.0320177)	(0.0331249)	(0.0297611)	(0.0320713)	(0.0310147)	(0.0269127)
educa	0.1097627	0.2220842	0.2686513	-	-	-
	(0.2215778)	(0.2108196)	(0.2065946)	-	-	-
incom	-0.0000866**	-0.0001012**	-0.0001246**	-0.0000764**	-0.0000494*	-0.0000631**
	(0.0000388)	(0.0000415)	(0.0000412)	(0.0000323)	(0.0000271)	(0.0000282)
savin	0.9685646	-	-	-	-	-
	(0.782321)	-	-	-	-	-
Deptx	-	1.284421*	1.245367*	1.130291	-	-
	-	(0.7693936)	(0.7322445)	(0.7526373)	-	-
malex	-1.259177**	-1.155575*	-1.167187*	0.8783807	-	-
	(0.6352796)	(0.6246689)	(0.5980443)	(0.5814672)	-	-
health	1.612000***	1.682507***	1.636180***	1.757712***	1.673136***	1.621671***
	(0.3759989)	(0.3929126)	(0.3674064)	(0.3854302)	(0.3605029)	(0.3382963)
skill	0.9232465	1.129498	1.218978	-	-	-
	(0.7873229)	(0.825764)	(0.7787256)	-	-	-
dchil	-0.9405715*	-1.066978*	-	-1.128237**	-1.160669**	-
	(0.4811513)	(0.4974204)	-	(0.4727005)	(0.4694314)	-
mgchi	-0.4767072	-0.3686337	-	-	-	-
	(0.6979015)	(0.7184275)	-	-	-	-
Constant	2.498436	1.314388	0.2812861	2.519865	3.33091	2.079301
	(2.574867)	(2.643709)	(2.458809)	(2.452069)	(2.371203)	(2.151226)
N	253	253	253	253	253	253
Log likelihood	-43.024429	-42.287216	-44.369706	-43.838091	-46.116101	-48.900157
Pseudo R^2	0.4055	0.4157	0.3869	0.3942	0.3628	0.3243

Note: significant level *** $p<0.01$ (99%), ** $p<0.05$ (95%), * $p<0.1$ (90%)

Table 5 The model estimation for the rural area

Variables	(1)	(2)	(3)	(4)	(5)
agexx	-0.0486074*	-0.0484756*	-0.0485617*	-0.0532372**	-0.0493688**
	(0.0278411)	(0.0276722)	(0.0254035)	(0. 024498)	(0.0239382)
educa	0.1198391	0.1468283	-	-	-
	(0.2571929)	(0.2679593)	-	-	-
incom	-0.00000732	-0.00000766	-0.0000180	-	-
	(0.0000292)	(0.0000319)	(0. 0000303)	-	-
savin	1.193499**	-	-	-	-
	(0.4971173)	-	-	-	-
Deptx	-	1.343688**	1.066917**	1.116803**	1.185362**
	-	(0.525965)	(0.4793633)	(0.4758607)	(0.4676133)
malex	-0.3004164	-0.3621224	-	-	-
	(0.4785285)	(0.4856032)	-	-	-
health	0.7903342***	0.9225671***	0.872151***	0.8948566***	0.905316***
	(0. 2312516)	(0.240971)	(0. 350018)	(0.2322686)	(0.2329502)
skill	1.329738	0.7488971	0.7428278	0.7762782	-
	(0.9939493)	(0.9921856)	(0.446915)	(0.9453149)	-
dchil	-0.0074137	-0.367990	-	-	-
	(0.518370)	(0.4715136)	-	-	-
mgchi	-0.5212343	-0. 6855772	-	-	-
	(0.4929246)	(0.5010767)	-	-	-
Constant	0.5586033	1.052064	1.27428	1.605501	2.032208
	(2.288953)	(2.215303)	(2.001356)	(1.93733)	(1.887083)
N	249	249	249	249	249
Log likelihood	-67.818386	-67.156803	-68.759378	-68.988129	-69.299883
Pseudo R^2	0.2596	0.2669	0.2494	0.2469	0.2435

Note: significant level *** $p<0.01$ (99%), ** $p<0.05$ (95%), * $p<0.1$ (90%)

As for the rural area, age is still the key factor explaining labour market participation. Debt is a factor that shows how the elderly with debt tend to need to work more. Health condition variable confirms that a healthier person will want to work more.

On the assessment of the digital platform, it is found that there are several digital platforms that are designed to help people find jobs or the so-called job-search applications. However, it is found that many existing job-search applications are designed for job-search in the formal labour market. These job-search applications are designed to help workers who possess skills, such as, accountants, engineers, architects, lawyers etc. The job-search applications do not have smart search capabilities that will enable the elderly to search for informal jobs, such as, baking, pet care, baby sitting, craftmanship, weaving, or singing.

The existing job-search applications also lack functions, such as allowing the employers to build their profiles and advertise their skills, locations of the employees or allowing previous employers to review the employees or the employees to review the employers.

It is therefore recommended that there is much room for improvement in the job-search applications. An job-search digital platform need to be specifically designed to help the elderly re-enter the labour market and to help the demand for elderly workers find the workers that suit the job description. This research recommends that a desirable digital platform that will help increase employability of the elderly should have the following functions: smart job search, profile of the employers and the employees, location of the employees and the employers, job review for both the employers and the employees, and advertising space so that the digital platform can earn revenue to be used to maintain such digital platform.

7.Conclusions and Recommendations

The trend of the elderly population is continuously increasing causing Thailand to enter an aged society in 2022. The elderly workers are less than half of the total elderly population, most of them are informal workers. The elderly still face problems in many areas, for example, a high proportion of elderly who have no income, an attitude towards

work of the elderly, and legal regulation that forces retirement, increasing welfare expenses in the government sector, etc. Even though Thailand has developed a digital work platform for the elderly, most of them cover only formal employment. Therefore, there is a need for innovative lifelong learning development. for the work of the elderly to support an aged society.

The results of the study on employment operations found that Thailand has responsible agencies and laws related to the work of the elderly, including a variety of policies and measures to promote elderly employment. There are 3 levels of implementation of policies regarding the employment of the elderly in foreign countries and Thailand 1) Policies that are implemented in many countries, such as having a pension system, promoting work and developing/increasing skills, providing a friendly, safe workplace, etc. 2) Policies implemented in some countries, such as extending the retirement age and providing support for establishments that employ the elderly, promoting employment of the elderly in small and medium-sized enterprises and creating a wage system based on the age of workers, etc. and 3) policies that have been implemented in only a few countries, such as abolishing the retirement age. Increasing and decreasing benefits for workers beyond retirement age, promoting entrepreneurship, and reducing corporate income tax for entrepreneurs who employ the elderly, etc.

The results of an opinion survey on factors in deciding to work after retirement among a sample of 502 people in 5 provinces found that most had a desire to work after retirement. There are similar factors in deciding to work after retirement for the elderly in both urban and rural areas which are age and health. The factors that are different between the urban and rural areas are per capita income per month, debt, number of children who need to be taken care of, etc.

A framework for developing innovative lifelong learning for the work of the elderly focusing on using existing human capital to create income for themselves and their family by developing the informal labor market to make it easier for employers and employees to communicate with each other and reduce transaction costs. The structure of the web application to promote employment of the elderly should cover details of user information (Profile) of employers and employees, location of work and employees on a map system (Google Map), searching information freely (smart search), and the assessment or review for both employers and employees (review and comment), a messaging system (Messenger)

which can interact directly with each other, and space for an advertisement on the platform to create income sustainably, moreover, as well as knowledge about the elderly and emergency call systems.

Guidelines for developing and promoting the employment of elderly in formal and informal workers. Employment of elderly should focus on the demand of entrepreneurs and the elderly to hire workers according to the potential of the elderly and their age-appropriateness and ensure that the elderly have sufficient income to support their living after retirement. In the past, the forms of formal and informal employment of the elderly, included the use of financial instruments, such as promoting savings for the elderly to create stability after retirement, the allocation of the budgets of the government to increase welfare for the elderly and Upskill and Reskill for elderly to increase employment opportunities. In addition, the guidelines for formal employment of the elderly in the public and private sectors continuously promote the employment of elderly workers with experience and expertise in their professions, the development of technology and variety of work skills that are necessary to support changes, and raising in the retirement age so that the elderly can remain in the formal employment. The informal employment of the elderly focuses on promoting the use of expertise or skills of the elderly who are entering retirement age (soft skills) so that they can return to society and generate income for themselves and their families. In addition, the development of the informal labor market to encourage the employers and elderly workers can meet more easily, or the reduction of transaction costs, and the opportunity to increase productivity and generate income for the elderly workers so that the elderly have stability without having to rely on the government welfare and to have sufficient income for their retirement and create economic value or overall income to move towards becoming a quality aging society.

The study has policy recommendations for developing types of employment for the elderly to support an aged society, including promoting informal employment through digital platforms or local agencies. Formal employment should adjust an appropriate type of work and compensation, support accessing to public health services, and consultations with digital technology, reviewing/avoiding government intervention that leads to distortions in the labor market and undermines the employment of the elderly, such as the hourly wages determination, working period, regulation on compensation payment, etc., training to increase professional skills, abilities to use technology, counseling channels for employment,

creating understanding and attitudes towards the elderly in using their skills and expertise to generate income. Moreover, consider expanding the coverage of the social security system to delay the exit from the labor force and promote appropriate entry into work. Moreover, the research team presented recommendations to relevant government agencies and representatives of private entrepreneurs as a mechanism to drive cooperation and promote the employment of elderly workers, especially digital innovations in employment platforms and the promotion of positive attitudes towards employment among the elderly.